

## PATENT COOPERATION TREATY

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner  
 US Department of Commerce  
 United States Patent and Trademark  
 Office, PCT  
 2011 South Clark Place Room  
 CP2/5C24  
 Arlington, VA 22202  
 ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

<b>Date of mailing (day/month/year)</b> 14 May 2001 (14.05.01)	
<b>International application No.</b> PCT/BG00/00022	<b>Applicant's or agent's file reference</b> GEORGIEV
<b>International filing date (day/month/year)</b> 02 August 2000 (02.08.00)	<b>Priority date (day/month/year)</b> 27 August 1999 (27.08.99)
<b>Applicant</b> GEORGIEV, Goran Dimitrov et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:  
 20 March 2001 (20.03.01)

☐ in a notice effecting later election filed with the International Bureau on:  
 \_\_\_\_\_

2. The election ☒ was

☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Claudio Borton
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38

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## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference ***	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/BG00/00022	International filing date (day/month/year) 02/08/2000	Priority date (day/month/year) 27/08/1999
International Patent Classification (IPC) or national classification and IPC G02B6/42		
Applicant GEORGIEV, Goran Dimitrov et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 5 sheets, including this cover sheet.

- ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand  20/03/2001	Date of completion of this report  11.12.2001
Name and mailing address of the international preliminary examining authority:   European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized officer  Jakober, F  Telephone No. +31 70 340 3652  

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/BG00/00022

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, pages:**

1-40 as originally filed

**Claims, No.:**

1-9 as originally filed

**Drawings, sheets:**

1/10-10/10 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/BG00/00022

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Yes:	Claims	7-9
	No:	Claims	1-6
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-9
Industrial applicability (IA)	Yes:	Claims	1-9
	No:	Claims	

2. Citations and explanations  
**see separate sheet**

## VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:  
**see separate sheet**

## VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:  
**see separate sheet**

**Re Item V**

Reference is made to the following document:

D1: SHAH V ET AL: 'PACKAGING TECHNOLOGY FOR HIGH-POWER, SINGLEMODE-FIBER-PIGTAILED PUMP LASER MODULES FOR ER-DOPED FIBER AMPLIFIERS' PROCEEDINGS OF THE ELECTRONIC COMPONENTS AND TECHNOLOGY CONFERENCE. (ECTC),US,NEW YORK, IEEE, vol. CONF. 42, 18 May 1992 (1992-05-18), pages 842-847, XP000474037 ISBN: 0-7803-0167-6

1. Notwithstanding the severe lack of clarity of the claims (see point VIII), it is understood that claim 1 and 3 relates to a method and the corresponding device for connection and adjustment of optical units (fibres, lasers...). The device comprises two carriers for the optical elements and an intermediate body. It allows both a lateral movements and angular movements of one of the carrier relative to the other. The alignment procedure consists of successive series of lateral and angular shift in order to optimize the coupling.

All these features can be found for example in document D1. Two optical elements holder and an intermediate element are disclosed (see figures 1, 3 and 4, elements A and B on figure 1 and the fibre holder on figure 3). Figures 1, 3 and 4 clearly show that both lateral and angular movement are performed in order to allow the optimum alignment between the optical elements.

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~~The subject-matter of claim 1 and 3 seems therefore not to be new contrary to Art. 33(2) PCT.~~

2. As far as the intended scope of the dependent claims can at present be determined, it appears that the subject-matter of the dependent claims concerns features relating to routine measures disclosed in the prior art (claims 2, 4-6) and therefore not new, or normally to be expected of a skilled person (7-9), so that no inventive merit can be attributed thereto.

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/BG00/00022

**Re Item VII**

Certain defects in the international application

1. The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).

**Re Item VIII**

Certain observations on the international application

1. Claims 1 and 3 contain many alternatives such that their subject-matter is rendered unclear contrary to Art. 6 PCT. Some alternatives cover all possibilities such that they become superfluous (for example "movably or immovably" in claim 1).  
As far as possible, the general concept should be covered by independent claims and the different embodiments should appear in the dependent claims.  
When read in combination with the head claims upon which they depend, the dependant claims do not provide clarification to. This is because they do not elaborate upon obscurities identified above. For this reason, the dependant claims are also not clear (art. 84, EPC).  
It is noted that the present wording of the claims is unclear and renders difficult the understanding of their scope and therefore the appreciation of novelty and inventive step.
2. The abbreviations "i.e." and "OU" in the claims should be replaced by their signification (Art.6 PCT).
3. Claims 8 and 9 relate to a device. Therefore, they should not depend on claims 1 and 2, those two claims relating to a method (Art.6 PCT).



**(15) Information about Correction:**

see PCT Gazette No. 18/2001 of 3 May 2001, Section II

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

## PATENT COOPERATION TREATY

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## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/BG 00/ 00022</b>	International filing date (day/month/year) <b>02/08/2000</b>	(Earliest) Priority Date (day/month/year) <b>27/08/1999</b>
Applicant <b>GEORGIEV, Goran Dimitrov et al.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

**4. With regard to the title,**

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

**5. With regard to the abstract,**

☐ the text is approved as submitted by the applicant.

☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

**6. The figure of the drawings to be published with the abstract is Figure No.**

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

1☐ None of the figures.



## INTERNATIONAL SEARCH REPORT

International application No.

PCT/BG 00/00022

B x III TEXT OF THE ABSTRACT (Continuation of it m 5 of th first sheet)

The device comprises at least one triad of two end carriers /1,2/ and an interstitial body /3/, the three bodies being hard and forming an optical channel with a rectilinear axis in the case of one triad of bodies, or angularly refracted or branched in the case of more than one triad with a common, immovable body /1/ or /2/ or /3/. One of the end bodies /1/ or /2/ and the interstitial body /3/ are connected by a spatial hinge, while the other end body /2/ or /1/ and the interstitial body /3/ are connected in a common slip plane. The contact surfaces of the hinge are either a part of a concave sphere /8/ and a base of a circular cylinder /9/, or a part of a concave cylinder /10/ and a base of a parallelepiped /11/ or cube /12/, or a part of a concave ellipsoid /13/ and a part of an elliptic cylinder /14/. Each concave surface /8,10,13/ has a centre /0/ or a central axis /0'-0''/ disposed either between the hinge bodies or in one of the end bodies or outside the three bodies. Each of the bodies connected in a slip plane has a frontal contact plane /15/ transversal to the axis thereof. The movable bodies are connected and locked by the same coupling and locking screws /4,5/ arranged by groups and situated in one or two bodies of each triad. The axes of the screws of the two groups are mutually crossing and/or perpendicularly intersecting.

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/BG 00/00022

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7. G02B6/42

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G02B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 395 607 A (ERICSSON TELEFON AB L M) 31 October 1990 (1990-10-31) abstract; figures 1,2 column 2, line 39 -column 4, line 10 ----	1-9
A	EP 0 443 454 A (PIRELLI CAVI SPA) 28 August 1991 (1991-08-28) abstract; figures 1-5,8 column 2, line 19 -column 4, line 15 ----	1-9
A	SU 883 838 A (MILLER VLADIMIR A;SHANICHEV GERMAN YA; BAKUEV ANATOLIJ A) 23 November 1981 (1981-11-23) cited in the application figure 1 ----- -/--	1-9

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents:

\*A\* document defining the general state of the art which is not considered to be of particular relevance

\*E\* earlier document but published on or after the international filing date

\*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

\*O\* document referring to an oral disclosure, use, exhibition or other means

\*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*S\* document member of the same patent family

Date of the actual completion of the international search

29 November 2000

Date of mailing of the international search report

07/12/2000

Name and mailing address of the ISA

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NL - 2280 HV Rijswijk  
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Authorized officer

Jakober, F

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/BG 00/00022

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>SHAH V ET AL: "PACKAGING TECHNOLOGY FOR HIGH-POWER, SINGLEMODE-FIBER-PIGTAILED PUMP LASER MODULES FOR ER-DOPED FIBER AMPLIFIERS" PROCEEDINGS OF THE ELECTRONIC COMPONENTS AND TECHNOLOGY CONFERENCE. (ECTC),US,NEW YORK, IEEE, vol. CONF. 42, 18 May 1992 (1992-05-18), pages 842-847, XP000474037 ISBN: 0-7803-0167-6 the whole document -----</p>	1-9

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/BG 00/00022

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0395607	A	31-10-1990	SE 465098 B DE 69007160 D DE 69007160 T ES 2050420 T JP 2296206 A SE 8901502 A US 4997254 A	22-07-1991 14-04-1994 16-06-1994 16-05-1994 06-12-1990 26-10-1990 05-03-1991
EP 0443454	A	28-08-1991	IT 1239223 B BR 9100758 A CA 2036588 A JP 5019129 A US 5095517 A	28-09-1993 22-11-1994 21-08-1991 29-01-1993 10-03-1992
SU 883838	A	23-11-1981	NONE	